

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssptasxml624

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 06	CAS REGISTRY enhanced with new experimental property tags
NEWS	3	AUG 06	FSTA enhanced with new thesaurus edition
NEWS	4	AUG 13	CA/CAPLUS enhanced with additional kind codes for granted patents
NEWS	5	AUG 20	CA/CAPLUS enhanced with CAS indexing in pre-1907 records
NEWS	6	AUG 27	Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS	7	AUG 27	USPATOLD now available on STN
CAS	8	AUG 28	CAS REGISTRY enhanced with additional experimental spectral property data
NEWS	9	SEP 07	STN AnaVist, Version 2.0, now available with Derwent World Patents Index
NEWS	10	SEP 13	FORIS renamed to SOFIS
NEWS	11	SEP 13	INPADOCDB enhanced with monthly SDI frequency
NEWS	12	SEP 17	CA/CAPLUS enhanced with printed CA page images from 1967-1998
NEWS	13	SEP 17	CAPLUS coverage extended to include traditional medicine patents
NEWS	14	SEP 24	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	15	OCT 02	CA/CAPLUS enhanced with pre-1907 records from Chemisches Zentralblatt
NEWS	16	OCT 19	BEILSTEIN updated with new compounds
NEWS	17	NOV 15	Derwent Indian patent publication number format enhanced
NEWS	18	NOV 19	WPIX enhanced with XML display format
NEWS	19	NOV 30	ICSD reloaded with enhancements
NEWS	20	DEC 04	LINPADOCDB now available on STN
NEWS	21	DEC 14	BEILSTEIN pricing structure to change
NEWS	22	DEC 17	USPATOLD added to additional database clusters
NEWS	23	DEC 17	IMSDRUGCONF removed from database clusters and STN
NEWS	24	DEC 17	DGENE now includes more than 10 million sequences
NEWS	25	DEC 17	TOXCENTER enhanced with 2008 MeSH vocabulary in MEDLINE segment
NEWS	26	DEC 17	MEDLINE and LMEEDLINE updated with 2008 MeSH vocabulary
NEWS	27	DEC 17	CA/CAPLUS enhanced with new custom IPC display formats
NEWS	28	DEC 17	STN Viewer enhanced with full-text patent content from USPATOLD
NEWS	29	JAN 02	STN pricing information for 2008 now available
NEWS	30	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	31	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new

custom IPC display formats
 NEWS 32 JAN 28 MARPAT searching enhanced
 NEWS 33 JAN 28 USGENE now provides USPTO sequence data within 3 days
 of publication
 NEWS 34 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 35 JAN 28 MEDLINE and LMEDELINE reloaded with enhancements

NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
 CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
 AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN Welcome Banner and News Items
 NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
 specific topic.

All use of STN is subject to the provisions of the STN Customer
 agreement. Please note that this agreement limits use to scientific
 research. Use for software development or design or implementation
 of commercial gateways or other similar uses is prohibited and may
 result in loss of user privileges and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 11:34:39 ON 05 FEB 2008

```
=> fil reg
COST IN U.S. DOLLARS                SINCE FILE      TOTAL
                                     ENTRY      SESSION
FULL ESTIMATED COST                0.21          0.21
```

FILE 'REGISTRY' ENTERED AT 11:34:54 ON 05 FEB 2008
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

STRUCTURE FILE UPDATES: 4 FEB 2008 HIGHEST RN 1001463-85-9
 DICTIONARY FILE UPDATES: 4 FEB 2008 HIGHEST RN 1001463-85-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

10542940.trn

=> U

U IS NOT A RECOGNIZED COMMAND

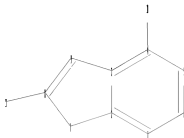
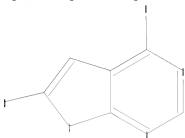
The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=>

Uploading C:\Program Files\Stnexp\Queries\10542940.str



chain nodes :

10 11

ring nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

4-10 8-11

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9

exact/norm bonds :

2-7 3-9 4-10 7-8 8-9

exact bonds :

8-11

normalized bonds :

1-2 1-6 2-3 3-4 4-5 5-6

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS

11:CLASS

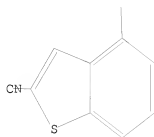
L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR

10542940.trn



Structure attributes must be viewed using SIN Express query preparation.

=> s ll sam

SAMPLE SEARCH INITIATED 11:35:19 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

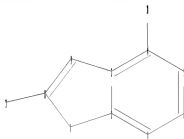
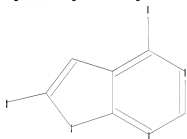
PROJECTED ITERATIONS: 106 TO 614

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=>

Uploading C:\Program Files\Stnexp\Queries\10542940.str



chain nodes :

10 11

ring nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

4-10 8-11

ring bonds :

1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9

exact/norm bonds :

2-7 3-9 4-10 7-8 8-9

exact bonds :

8-11

normalized bonds :

10542940.trn

1-2 1-6 2-3 3-4 4-5 5-6

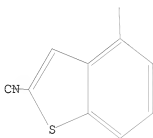
Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS

L3 STRUCTURE UPLOADED

=> del 11-12
DELETE L1-L2? (Y)/N:y

=> d 13
L3 HAS NO ANSWERS
L3 STR

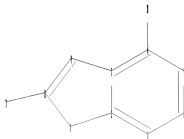
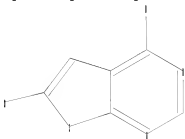


Structure attributes must be viewed using STN Express query preparation.

=> del 11-13
'L1' WAS PREVIOUSLY DELETED
L-number to be deleted has already been deleted. Enter DISPLAY HISTORY
at an arrow prompt (=>) to list active L-numbers that may be deleted.

=> del 13
DELETE L3? (Y)/N:y

=>
Uploading C:\Program Files\Stnexp\Queries\10542940.str



chain nodes :
10 11

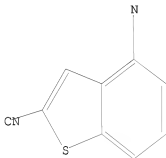
10542940.trn

ring nodes :
1 2 3 4 5 6 7 8 9
chain bonds :
4-10 8-11
ring bonds :
1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9
exact/norm bonds :
2-7 3-9 4-10 7-8 8-9
exact bonds :
8-11
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 sam
SAMPLE SEARCH INITIATED 11:37:18 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 18 TO ITERATE

100.0% PROCESSED 18 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 106 TO 614
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 11:37:25 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 237 TO ITERATE

100.0% PROCESSED 237 ITERATIONS

1 ANSWERS

SEARCH TIME: 00.00.01

L3

1 SEA SSS FUL L1

=> fil capl

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

179.74

179.95

FILE 'CAPLUS' ENTERED AT 11:37:34 ON 05 FEB 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 5 Feb 2008 VOL 148 ISS 6

FILE LAST UPDATED: 4 Feb 2008 (20080204/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

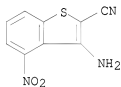
=> s l3

L4 2 L3

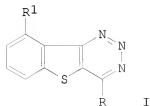
=> d ibib hitstr abs 1-2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1977:423339 CAPLUS
 DOCUMENT NUMBER: 87:23339
 ORIGINAL REFERENCE NO.: 87:3701a,3704a
 TITLE: [1]Benzothieno [3,2-d]-v-triazines
 INVENTOR(S): Yahner, Joseph Andrew
 PATENT ASSIGNEE(S): Eli Lilly and Co., USA
 SOURCE: U.S., 5 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4018768	A	19770419	US 1975-636885	19751202
CA 1055030	A1	19790522	CA 1976-264326	19761027
IL 50793	A	19790312	IL 1976-50793	19761028
DE 2649538	A1	19770608	DE 1976-2649538	19761029
GB 1562820	A	19800319	GB 1976-49119	19761125
BR 7607964	A	19771108	BR 1976-7964	19761129
FR 2333803	A1	19770701	FR 1976-36221	19761201
FR 2333803	B1	19790601		
BE 848973	A1	19770602	BE 1976-1007800	19761202
JP 52068199	A	19770606	JP 1976-145513	19761202
NL 7613471	A	19770606	NL 1976-13471	19761202
PRIORITY APPLN. INFO.:			US 1975-636885	A 19751202
IT 52673-87-7				
		RL: RCT (Reactant); RACT (Reactant or reagent)		
		(diazotization of)		
RN 52673-87-7		CAPLUS		
CN Benzo[b]thiophene-2-carbonitrile, 3-amino-4-nitro-		(CA INDEX NAME)		



GI



AB The title compds. I (R = Cl, R1 = H, Cl, NO2) were obtained by

diazotization of the corresponding aminobenzothiophenecarbonitrile with NaNO_2 in HCl . Treatment of I ($R = \text{Cl}$, $R_1 = \text{H}$) with NaOMe , $\text{N}_2\text{H}_4 \cdot \text{H}_2\text{O}$, Me_2NH , and MeNH_2 gave I ($R = \text{MeO}$, NH_2NH , Me_2N , MeNH), resp. I are useful as bactericides, fungicides, virucides, algicides, and protozoacides (no data).

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1975:4082 CAPLUS

DOCUMENT NUMBER: 82:4082

ORIGINAL REFERENCE NO.: 82:699a,702a

TITLE: Synthesis of 2-cyano, 2-acyl, and 2-carboxamido derivatives of 3-aminobenzo[b]thiophene involving nitro displacement

AUTHOR(S): Beck, James R.; Yahner, Joseph A.

CORPORATE SOURCE: Lilly Res. Lab., Greenfield, IN, USA

SOURCE: Journal of Organic Chemistry (1974), 39(23), 3440-1

CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

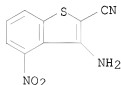
LANGUAGE: English

IT 52673-87-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 52673-87-7 CAPLUS

CN Benzo[b]thiophene-2-carbonitrile, 3-amino-4-nitro- (CA INDEX NAME)



GI For diagram(s), see printed CA Issue.

AB 3-Aminobenzo[b]thiophenes I, substituted at the 2 position with CN, Ac, Bz, and CONH2, were prepared from o-nitrobenzonitriles, Na2S, and ClCH2CN, ClCH2COMe, ClCH2COPh, and ClCH2CONH2, resp. In a second procedure HSCH2CH2CN and KOH are substituted for Na2S. The following I were prepared: X = 4-Cl, R = CN, Ac, Bz, CONH2; X = 4-NO2, R = CN, Ac, Bz, CONH2; X = 6-Cl, R = CN; X = 5-NO2, R = CN, Bz; X = H, R = CN, Ac; X = 4-OMe, R = CN. 2-Chloro-6-[(2-cyanoethyl)thio]benzonitrile was prepared from 2-chloro-6-nitrobenzonitrile and HSCH2CH2CN in the presence of KOH.

```
=> fil reg
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                               ENTRY      SESSION
FULL ESTIMATED COST          11.86      191.81

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)  SINCE FILE      TOTAL
                                               ENTRY      SESSION
CA SUBSCRIBER PRICE              -1.60      -1.60
```

FILE 'REGISTRY' ENTERED AT 11:38:38 ON 05 FEB 2008
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
 COPYRIGHT (C) 2008 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
 provided by InfoChem.

```
STRUCTURE FILE UPDATES:   4 FEB 2008  HIGHEST RN 1001463-85-9
DICTIONARY FILE UPDATES:  4 FEB 2008  HIGHEST RN 1001463-85-9
```

New CAS Information Use Policies, enter HELP USAGETERMS for details.

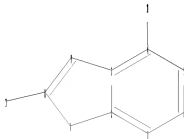
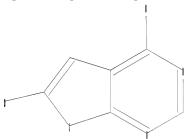
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=>
Uploading C:\Program Files\Stnexp\Queries\10542940.str
```



```
chain nodes :
10 11
ring nodes :
1 2 3 4 5 6 7 8 9
chain bonds :
4-10 8-11
ring bonds :
1-2 1-6 2-3 2-7 3-4 3-9 4-5 5-6 7-8 8-9
exact/norm bonds :
2-7 3-9 4-10 7-8 8-9
```

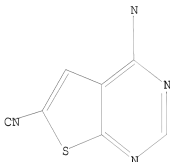
10542940.trn

exact bonds :
8-11
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:CLASS
11:CLASS

L5 STRUCTURE UPLOADED

=> d l5
L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l5 sam
SAMPLE SEARCH INITIATED 11:38:53 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 20 TO ITERATE

100.0% PROCESSED 20 ITERATIONS 7 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 132 TO 668
PROJECTED ANSWERS: 7 TO 298

L6 7 SEA SSS SAM L5

=> s l5 ful
FULL SEARCH INITIATED 11:38:57 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 329 TO ITERATE

100.0% PROCESSED 329 ITERATIONS 124 ANSWERS
SEARCH TIME: 00.00.01

L7 124 SEA SSS FUL L5

=> fil capl

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

178.36

370.17

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-1.60

FILE 'CAPLUS' ENTERED AT 11:39:02 ON 05 FEB 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 5 Feb 2008 VOL 148 ISS 6

FILE LAST UPDATED: 4 Feb 2008 (20080204/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s l7

L8

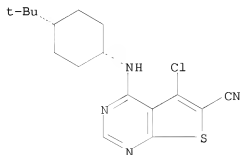
8 L7

=> d l8 ibib hitstr abs 1-8

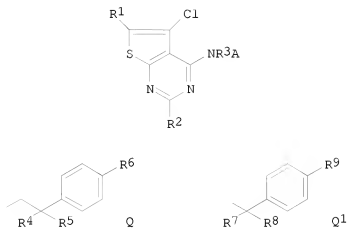
L8 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2007:1363848 CAPLUS
 DOCUMENT NUMBER: 147:535969
 TITLE: Preparation of 4-amino-5-chloro-thieno[2,3-d]pyrimidine derivatives as insecticides
 INVENTOR(S): Baumann, Ernst; Bastiaans, Henricus Maria Martinus; Von Deyn, Wolfgang; Puhl, Michael; Rack, Michael; Anspaugh, Douglas D.; Culbertson, Deborah L.; Oloumi-Sadeghi, Hassan
 PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 59pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007135029	A1	20071129	WO 2007-EP54717	20070515
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRIORITY APPLN. INFO.:			US 2006-802354P	P 20060522
OTHER SOURCE(S):		MARPAT 147:535969		
IT 957113-81-4P				
RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation as insecticide)				
RN 957113-81-4 CAPLUS				
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-[[cis-4-(1,1-dimethylethyl)cyclohexyl]amino]- (CA INDEX NAME)				

Relative stereochemistry.



GI



AB The 4-amino-5-chloro- thieno[2,3-d]-pyrimidine derivs. I [R¹ = H, halo, formyl, (halo)alkyl, (halo)alkenyl, (halo)alkynyl, etc; R² = H, halo, (halo)alkyl, (halo)alkoxy, etc.; R³ = H or alkyl; A = Q or Q¹; R⁴, R⁵, R⁷ = H or alkyl; R⁸ = alkyl; R⁶, R⁹ = halo, (halo)alkyl or (halo)alkoxy; R¹⁰ = (halo)alkyl] are prepared as insecticides.

L8 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2004:633932 CAPLUS
 DOCUMENT NUMBER: 141:157133
 TITLE: Preparation of 4-aminothieno[2,3-d]pyrimidine-6-carbonitrile derivatives as PDE7 inhibitors
 INVENTOR(S): Terricabras Belart, Emma; Segarra Matamoros, Victor Manuel; Alvarez-Builla Gomez, Julio; Vaquero Lopez, Juan Jose; Minguez Ortega, Jose Miguel
 PATENT ASSIGNEE(S): Almirall Prodesfarma S.A., Spain
 SOURCE: PCT Int. Appl., 124 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004065391	A1	20040805	WO 2004-EP584	20040123
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ				
ES 2217956	A1	20041101	ES 2003-172	20030123
ES 2217956	B1	20060401		
EP 1590352	A1	20051102	EP 2004-704579	20040123
EP 1590352	B1	20070627		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1761671	A	20060419	CN 2004-80007362	20040123
JP 2006515604	T	20060601	JP 2006-500010	20040123
AT 365742	T	20070715	AT 2004-704579	20040123
US 2006229306	A1	20061012	US 2005-542940	20050721
PRIORITY APPLN. INFO.:			ES 2003-172	A 20030123
			WO 2004-EP584	W 20040123

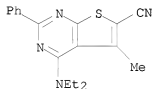
OTHER SOURCE(S): MARPAT 141:157133

IT 731855-70-2P, 4-(Diethylamino)-5-methyl-2-phenylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-77-9P, 4-(Diethylamino)-2-(4-methoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-81-5P, 4-(Dibutylamino)-2-(4-methoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-84-8P, 4-[Ethyl(methyl)amino]-2-(4-methoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-85-9P, 4-(Diethylamino)-5-methyl-2-(4-nitrophenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731855-86-0P, 2-(4-Chlorophenyl)-4-(diethylamino)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-87-1P, 4-(Diethylamino)-2-(3,4-dimethoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-89-3P, 4-(Dimethylamino)-2-(4-methoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-92-8P, 2-(4-Methoxyphenyl)-5-methyl-4-[methyl(prop-2-ynyl)amino]thieno[2,3-d]pyrimidine-6-carbonitrile 731855-93-9P, 4-[(2-Hydroxyethyl)(methyl)amino]-2-(4-methoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-94-0P, 2-(3,4-Dimethoxyphenyl)-4-[ethyl(methyl)amino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-96-2P, 4-(Diethylamino)-5-methyl-2-[4-(trifluoromethyl)phenyl]thieno[2,3-d]pyrimidine-6-carbonitrile 731855-97-3P, 4-[Allyl(methyl)amino]-2-(4-methoxyphenyl)-5-

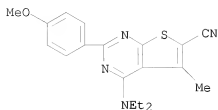
methylthieno[2,3-d]pyrimidine-6-carbonitrile 731855-98-4P, 2-(3,4-Dimethoxyphenyl)-4-[(2-hydroxyethyl)(methyl)amino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-03-4P, 4-(Diethylamino)-5-methyl-2-(4-methylphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-04-5P, 2-(1,3-Benzodioxol-5-yl)-4-(diethylamino)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-06-7P, 4-[Ethyl(methyl)amino]-5-methyl-2-(pyridin-4-yl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-07-8P, 4-[Ethyl(methyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-10-3P, 4-[(2-Hydroxyethyl)(methyl)amino]-5-methyl-2-(pyridin-4-yl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-11-4P, 2-(1,3-Benzodioxol-5-yl)-4-[(2-hydroxyethyl)(methyl)amino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-12-5P, 4-[(2-Hydroxyethyl)(methyl)amino]-5-methyl-2-(4-methylphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-13-6P, 4-(Diethylamino)-5-methyl-2-(pyridin-4-yl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-14-7P, 2-(3,4-Dimethoxyphenyl)-4-(dimethylamino)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-15-8P, 2-(3,4-Dimethoxyphenyl)-5-methyl-4-(propylamino)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-16-9P, 4-(Diethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-17-0P, 2-Benzyl-4-(diethylamino)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-19-2P, 4-[(2-Hydroxyethyl)methylamino]-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-21-6P, 4-Diethylamino-2-(3,5-dimethoxyphenyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-22-7P, 2-(3,5-Dimethoxyphenyl)-4-(ethylmethylamino)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-23-8P, 4-(6-Cyano-4-diethylamino-5-methylthieno[2,3-d]pyrimidin-2-yl)benzoic acid methyl ester 731856-24-9P, 4-[6-Cyano-4-(ethylmethylamino)-5-methylthieno[2,3-d]pyrimidin-2-yl]benzoic acid methyl ester 731856-26-1P, 2-Benzyl-4-[(2-hydroxyethyl)methylamino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-30-7P, Methyl 4-[6-cyano-4-(dimethylamino)-5-methylthieno[2,3-d]pyrimidin-2-yl]benzoate 731856-31-8P, Methyl 4-[6-cyano-4-[(2-hydroxyethyl)(methyl)amino]-5-methylthieno[2,3-d]pyrimidin-2-yl]benzoate 731856-32-9P, 5-Methyl-4-(methylamino)-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-33-0P, 4-(Dimethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-34-1P, 4-(Ethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-35-2P, 5-Methyl-4-(propylamino)-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-36-3P, 4-(Butylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-37-4P, 4-(Isopropylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-38-5P, 4-(sec-Butylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-39-6P, 4-(Isobutylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-40-9P, 4-[(1-Ethylpropyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-41-0P, 4-(tert-Butylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731856-42-1P, 4-(Cyclopropylamino)-5-methyl-2-(3,4,5-

trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-43-2P, 4-(Cyclobutylamino)-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-44-3P, 4-(Cyclopentylamino)-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-45-4P, 4-[Allyl(methyl)amino]-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-47-6P, 5-Methyl-4-[methyl(prop-2-ynyl)amino]-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-49-8P, 4-[(2-Hydroxyethyl)amino]-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-50-1P, 4-[(2-Methoxyethyl)amino]-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-52-3P, 4-[(2-(Dimethylamino)ethyl)amino]-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-60-3P, 4-[(2-Aminoethyl)(methyl)amino]-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-62-5P 731856-74-9P, 2-(3,4-Dimethoxybenzyl)-5-
 methyl-4-(methylamino)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-75-0P, 2-(3,4-Dimethoxybenzyl)-4-(ethylamino)-5-
 methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-76-1P,
 2-(3,4-Dimethoxybenzyl)-5-methyl-4-(propylamino)thieno[2,3-d]pyrimidine-6-
 carbonitrile 731856-77-2P, 4-(Cyclopropylamino)-2-(3,4-
 dimethoxybenzyl)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile
 731856-78-3P, 4-(Cyclobutylamino)-2-(3,4-dimethoxybenzyl)-5-
 methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-79-4P,
 2-(3,4-Dimethoxybenzyl)-4-(dimethylamino)-5-methylthieno[2,3-d]pyrimidine-
 6-carbonitrile 731856-80-7P, 2-(3,4-Dimethoxybenzyl)-4-
 [ethyl(methyl)amino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile
 731856-81-8P, 4-(Diethylamino)-2-(3,4-dimethoxybenzyl)-5-
 methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-82-9P,
 4-[Allyl(methyl)amino]-2-(3,4-dimethoxybenzyl)-5-methylthieno[2,3-
 d]pyrimidine-6-carbonitrile 731856-83-0P,
 2-(3,4-Dimethoxybenzyl)-5-methyl-4-[methyl(prop-2-ynyl)amino]thieno[2,3-
 d]pyrimidine-6-carbonitrile 731856-84-1P, 2-(3,4-
 Dimethoxybenzyl)-4-[(2-hydroxyethyl)amino]-5-methylthieno[2,3-d]pyrimidine-
 6-carbonitrile 731856-85-2P, 2-(3,4-Dimethoxybenzyl)-4-[(2-
 hydroxyethyl)(methyl)amino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile
 731856-86-3P, 2-(3,4-Dimethoxybenzyl)-4-[(2-methoxyethyl)amino]-5-
 methylthieno[2,3-d]pyrimidine-6-carbonitrile 731856-87-4P,
 4-[(2-(Dimethylamino)ethyl)(methyl)amino]-5-methyl-2-(3,4,5-
 trimethoxyphenyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-90-9P, 5-Methyl-4-(methylamino)-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-91-0P, 4-(Ethylamino)-5-methyl-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-92-1P, 5-Methyl-4-(propylamino)-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-93-2P, 4-(Isopropylamino)-5-methyl-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-94-3P, 4-(sec-Butylamino)-5-methyl-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-95-4P, 4-[(1-Ethylpropyl)amino]-5-methyl-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-96-5P, 4-(tert-Butylamino)-5-methyl-2-(3,4,5-
 trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-97-6P, 4-(Cyclopropylamino)-5-methyl-2-(3,4,5-

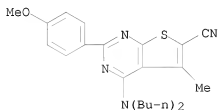
trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-98-7P, 4-(Cyclobutylamino)-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731856-99-8P, 4-(Dimethylamino)-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-00-4P, 4-[Ethyl(methyl)amino]-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-01-5P, 4-(Diethylamino)-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-02-6P, 4-[Allyl(methyl)amino]-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-03-7P, 5-Methyl-4-[methyl(prop-2-ynyl)amino]-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-04-8P, 4-[(2-Hydroxyethyl)amino]-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-05-9P, 4-[(2-Methoxyethyl)amino]-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-06-0P, 4-[(2-Hydroxyethyl)(methyl)amino]-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 731857-08-2P, 4-(Cyclobutylamino)-5-methyl-2-(2-phenylethyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731857-09-3P, 4-(Diethylamino)-5-methyl-2-(2-phenylethyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731857-11-7P, 4-(Diethylamino)-5-methyl-2-(3-phenylpropyl)thieno[2,3-d]pyrimidine-6-carbonitrile 731857-12-8P, 2-(3,5-Dimethoxyphenyl)-4-[(2-hydroxyethyl)methylamino]-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731857-14-0P, 2-(3,5-Dimethoxyphenyl)-4-(ethylamino)-5-methylthieno[2,3-d]pyrimidine-6-carbonitrile 731857-15-1P, 4-(Isobutylamino)-5-methyl-2-(3,4,5-trimethoxybenzyl)thieno[2,3-d]pyrimidine-6-carbonitrile
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of 4-aminothieno[2,3-d]pyrimidine-6-carbonitrile derivs. as pde7 inhibitors)
 RN 731855-70-2 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-phenyl- (CA INDEX NAME)



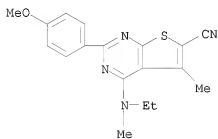
RN 731855-77-9 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-2-(4-methoxyphenyl)-5-methyl- (CA INDEX NAME)



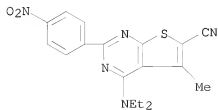
RN 731855-81-5 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(dibutylamino)-2-(4-methoxyphenyl)-5-methyl- (CA INDEX NAME)



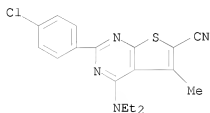
RN 731855-84-8 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(ethylmethylamino)-2-(4-methoxyphenyl)-5-methyl- (CA INDEX NAME)



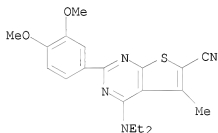
RN 731855-85-9 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(4-nitrophenyl)- (CA INDEX NAME)



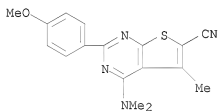
RN 731855-86-0 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(4-chlorophenyl)-4-(diethylamino)-5-methyl- (CA INDEX NAME)



RN 731855-87-1 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-2-(3,4-dimethoxyphenyl)-5-methyl- (CA INDEX NAME)

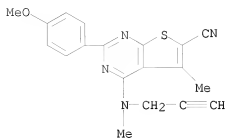


RN 731855-89-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(dimethylamino)-2-(4-methoxyphenyl)-5-methyl- (CA INDEX NAME)



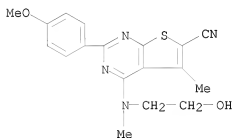
RN 731855-92-8 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(4-methoxyphenyl)-5-methyl-4-(methyl-2-propynylamino)- (9CI) (CA INDEX NAME)

10542940.trn



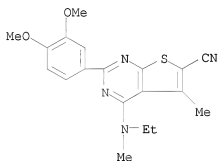
RN 731855-93-9 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-hydroxyethyl)methylamino]-2-(4-methoxyphenyl)-5-methyl- (CA INDEX NAME)



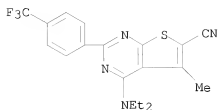
RN 731855-94-0 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,4-dimethoxyphenyl)-4-(ethylmethylamino)-5-methyl- (CA INDEX NAME)



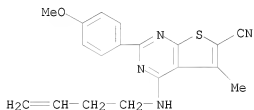
RN 731855-96-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)



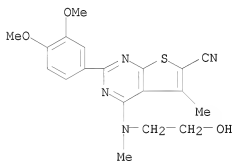
RN 731855-97-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(3-butenylamino)-2-(4-methoxyphenyl)-5-methyl- (9CI) (CA INDEX NAME)



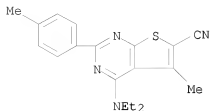
RN 731855-98-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,4-dimethoxyphenyl)-4-[(2-hydroxyethyl)methylamino]-5-methyl- (CA INDEX NAME)



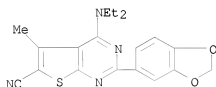
RN 731856-03-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(4-methylphenyl)- (CA INDEX NAME)



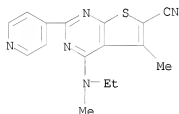
RN 731856-04-5 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(1,3-benzodioxol-5-yl)-4-(diethylamino)-5-methyl- (CA INDEX NAME)



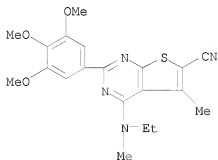
RN 731856-06-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(ethylmethylamino)-5-methyl-2-(4-pyridinyl)- (CA INDEX NAME)



RN 731856-07-8 CAPLUS

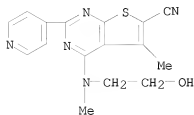
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(ethylmethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



10542940.trn

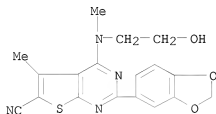
RN 731856-10-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-hydroxyethyl)methylamino]-5-methyl-2-(4-pyridinyl)- (CA INDEX NAME)



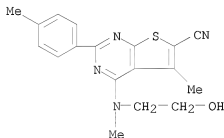
RN 731856-11-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(1,3-benzodioxol-5-yl)-4-[(2-hydroxyethyl)methylamino]-5-methyl- (CA INDEX NAME)



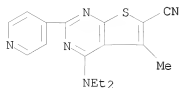
RN 731856-12-5 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-hydroxyethyl)methylamino]-5-methyl-2-(4-methylphenyl)- (CA INDEX NAME)



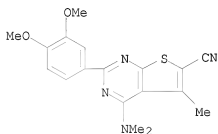
RN 731856-13-6 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(4-pyridinyl)- (CA INDEX NAME)



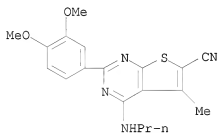
RN 731856-14-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,4-dimethoxyphenyl)-4-(dimethylamino)-5-methyl- (CA INDEX NAME)



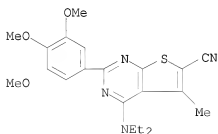
RN 731856-15-8 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,4-dimethoxyphenyl)-5-methyl-4-(propylamino)- (CA INDEX NAME)



RN 731856-16-9 CAPLUS

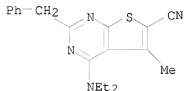
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



10542940.trn

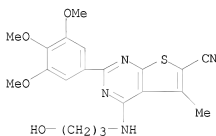
RN 731856-17-0 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(phenylmethyl)- (CA INDEX NAME)



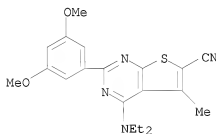
RN 731856-19-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(3-hydroxypropyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



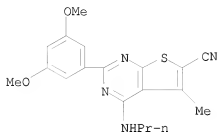
RN 731856-21-6 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-2-(3,5-dimethoxyphenyl)-5-methyl- (CA INDEX NAME)



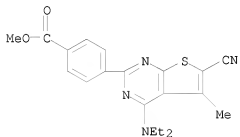
RN 731856-22-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,5-dimethoxyphenyl)-5-methyl-4-(propylamino)- (CA INDEX NAME)



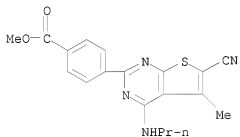
RN 731856-23-8 CAPLUS

CN Benzoic acid, 4-[6-cyano-4-(diethylamino)-5-methylthieno[2,3-d]pyrimidin-2-yl]-, methyl ester (CA INDEX NAME)



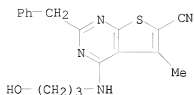
RN 731856-24-9 CAPLUS

CN Benzoic acid, 4-[6-cyano-5-methyl-4-(propylamino)thieno[2,3-d]pyrimidin-2-yl]-, methyl ester (CA INDEX NAME)



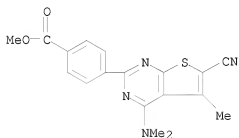
RN 731856-26-1 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(3-hydroxypropyl)amino]-5-methyl-2-(phenylmethyl)- (CA INDEX NAME)



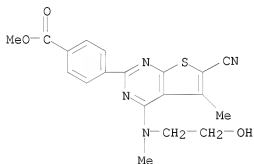
RN 731856-30-7 CAPLUS

CN Benzoic acid, 4-[6-cyano-4-(dimethylamino)-5-methylthieno[2,3-d]pyrimidin-2-yl]-, methyl ester (CA INDEX NAME)



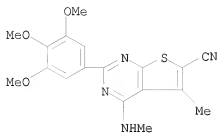
RN 731856-31-8 CAPLUS

CN Benzoic acid, 4-[6-cyano-4-[(2-hydroxyethyl)methylamino]-5-methylthieno[2,3-d]pyrimidin-2-yl]-, methyl ester (CA INDEX NAME)

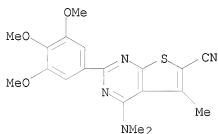


RN 731856-32-9 CAPLUS

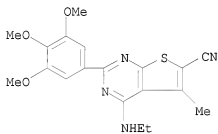
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-(methylamino)-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



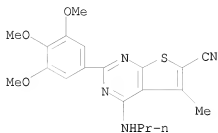
RN 731856-33-0 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(dimethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



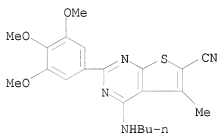
RN 731856-34-1 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(ethylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



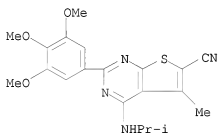
RN 731856-35-2 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-(propylamino)-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



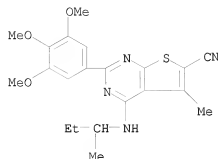
RN 731856-36-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(butylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



RN 731856-37-4 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-[(1-methylethyl)amino]-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)

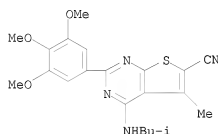


RN 731856-38-5 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-[(1-methylpropyl)amino]-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



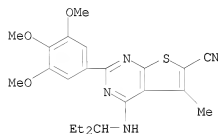
RN 731856-39-6 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-[(2-methylpropyl)amino]-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



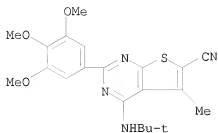
RN 731856-40-9 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(1-ethylpropyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)

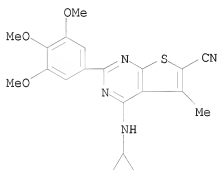


RN 731856-41-0 CAPLUS

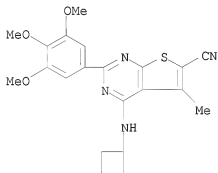
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(1,1-dimethylethyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



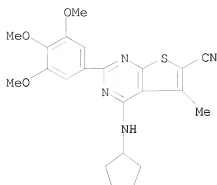
RN 731856-42-1 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclopropylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



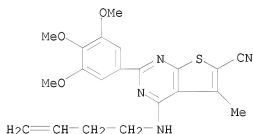
RN 731856-43-2 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclobutylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



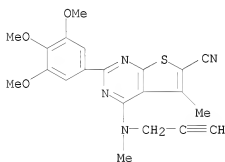
RN 731856-44-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclopentylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



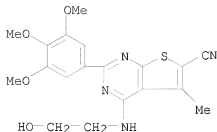
RN 731856-45-4 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(3-butenylamino)-5-methyl-2-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)



RN 731856-47-6 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-(methyl-2-propynylamino)-2-(3,4,5-trimethoxyphenyl)- (9CI) (CA INDEX NAME)

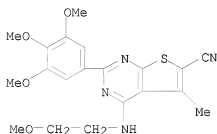


RN 731856-49-8 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-hydroxyethyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



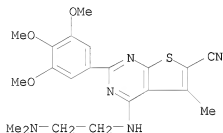
RN 731856-50-1 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-methoxyethyl)amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



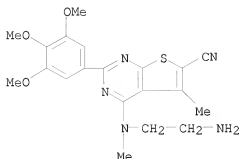
RN 731856-52-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[[2-(dimethylamino)ethyl]amino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



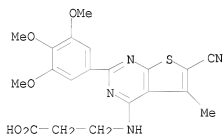
RN 731856-60-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-aminoethyl)methylamino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



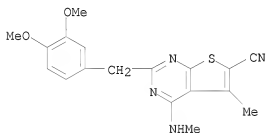
RN 731856-62-5 CAPLUS

CN β -Alanine, N-[6-cyano-5-methyl-2-(3,4,5-trimethoxyphenyl)thieno[2,3-d]pyrimidin-4-yl]- (CA INDEX NAME)



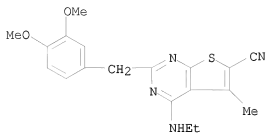
RN 731856-74-9 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-5-methyl-4-(methylamino)- (CA INDEX NAME)

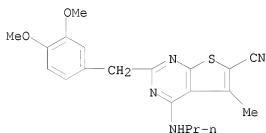


RN 731856-75-0 CAPLUS

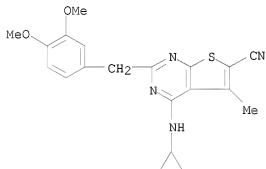
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-4-(ethylamino)-5-methyl- (CA INDEX NAME)



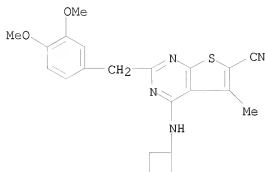
RN 731856-76-1 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-5-methyl-4-(propylamino)- (CA INDEX NAME)



RN 731856-77-2 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclopropylamino)-2-[(3,4-dimethoxyphenyl)methyl]-5-methyl- (CA INDEX NAME)

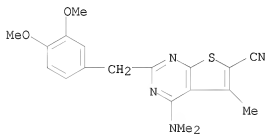


RN 731856-78-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclobutylamino)-2-[(3,4-dimethoxyphenyl)methyl]-5-methyl- (CA INDEX NAME)



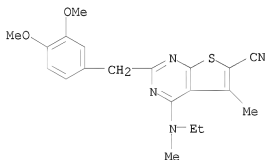
RN 731856-79-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-4-(dimethylamino)-5-methyl- (CA INDEX NAME)



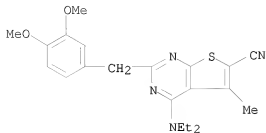
RN 731856-80-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-4-(ethylmethylamino)-5-methyl- (CA INDEX NAME)



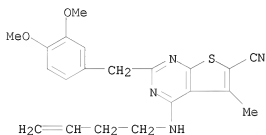
RN 731856-81-8 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-2-[(3,4-dimethoxyphenyl)methyl]-5-methyl- (CA INDEX NAME)



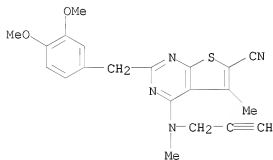
RN 731856-82-9 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-((3-butenylamino)-2-[(3,4-dimethoxyphenyl)methyl]-5-methyl- (9CI) (CA INDEX NAME)



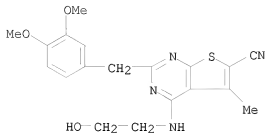
RN 731856-83-0 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-5-methyl-4-(methyl-2-propynylamino)- (9CI) (CA INDEX NAME)



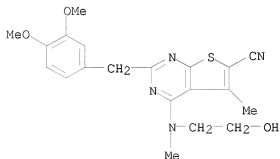
RN 731856-84-1 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-4-[(2-hydroxyethyl)amino]-5-methyl- (CA INDEX NAME)



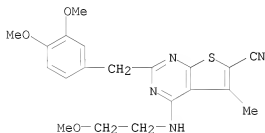
RN 731856-85-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-4-[(2-hydroxyethyl)methylamino]-5-methyl- (CA INDEX NAME)



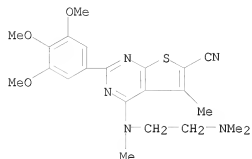
RN 731856-86-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-[(3,4-dimethoxyphenyl)methyl]-4-[(2-methoxyethyl)amino]-5-methyl- (CA INDEX NAME)



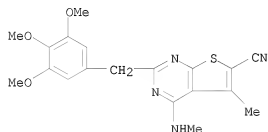
RN 731856-87-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[[2-(dimethylamino)ethyl]methylamino]-5-methyl-2-(3,4,5-trimethoxyphenyl)- (CA INDEX NAME)



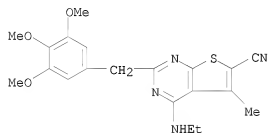
RN 731856-90-9 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-(methyamino)-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



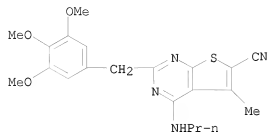
RN 731856-91-0 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(ethylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



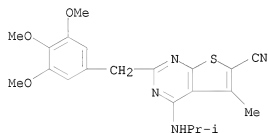
RN 731856-92-1 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-(propylamino)-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



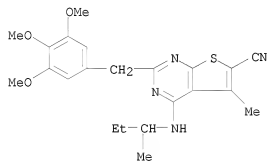
RN 731856-93-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-[(1-methylethyl)amino]-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



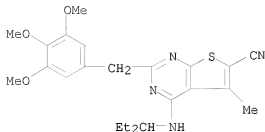
RN 731856-94-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-[(1-methylpropyl)amino]-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



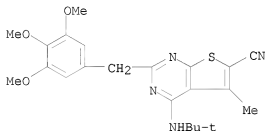
RN 731856-95-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(1-ethylpropyl)amino]-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



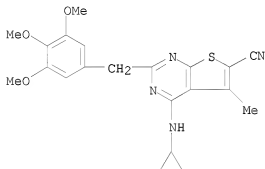
RN 731856-96-5 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(1,1-dimethylethyl)amino]-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



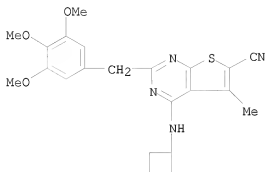
RN 731856-97-6 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclopropylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



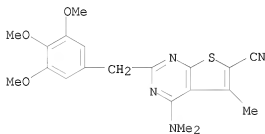
RN 731856-98-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclobutylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



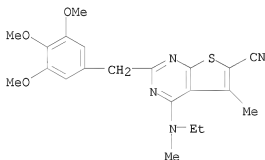
RN 731856-99-8 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(dimethylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



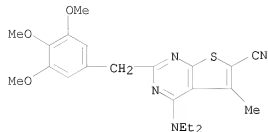
RN 731857-00-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(ethylmethylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



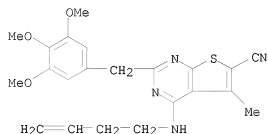
RN 731857-01-5 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



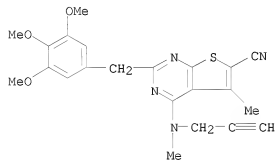
RN 731857-02-6 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(3-butenylamino)-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (9CI) (CA INDEX NAME)



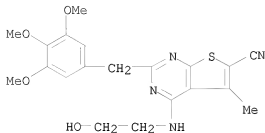
RN 731857-03-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-(methyl-2-propynylamino)-2-[(3,4,5-trimethoxyphenyl)methyl]- (9CI) (CA INDEX NAME)



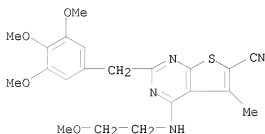
RN 731857-04-8 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-hydroxyethyl)amino]-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



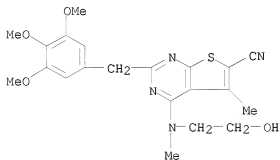
RN 731857-05-9 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-methoxyethyl)amino]-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



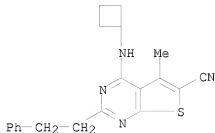
RN 731857-06-0 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(2-hydroxyethyl)methylamino]-5-methyl-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



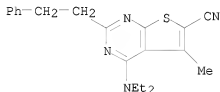
RN 731857-08-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(cyclobutylamino)-5-methyl-2-(2-phenylethyl)- (CA INDEX NAME)



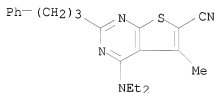
RN 731857-09-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(2-phenylethyl)- (CA INDEX NAME)



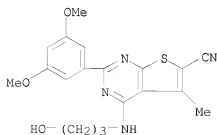
RN 731857-11-7 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(diethylamino)-5-methyl-2-(3-phenylpropyl)- (CA INDEX NAME)



RN 731857-12-8 CAPLUS

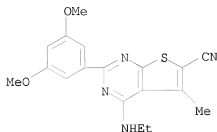
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,5-dimethoxyphenyl)-4-[(3-hydroxypropyl)amino]-5-methyl- (CA INDEX NAME)



RN 731857-14-0 CAPLUS

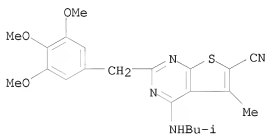
10542940.trn

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-(3,5-dimethoxyphenyl)-4-(ethylamino)-5-methyl- (CA INDEX NAME)

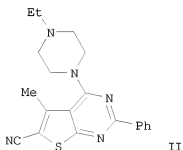
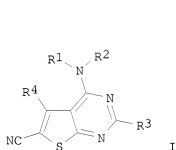


RN 731857-15-1 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-methyl-4-[(2-methylpropyl)amino]-2-[(3,4,5-trimethoxyphenyl)methyl]- (CA INDEX NAME)



GI



AB Title compds. I [R1-2 = H, alk(en/yn)yl, etc.; R3 = (CH2)_n-G; n = 0-4; G = mono/bicyclic (hetero)aryl; R4 = H, alkyl, aryl] are prepared. For instance, 5-methyl-4-oxo-2-phenyldihydrothieno[2,3-d]pyrimidine-6-carbonitrile (preparation given) is treated with an appropriately substituted piperazine to give II. All compds. of the invention have IC₅₀ < 10 μM for PDE7 inhibition. I are useful in the treatment, prevention or suppression of pathol. conditions, diseases and disorders susceptible of being improved by inhibition of PDE7.

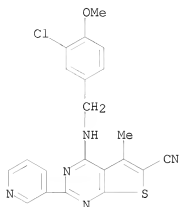
REFERENCE COUNT: 2

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

10542940.trn

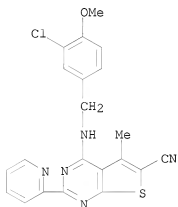
L8 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2002:256265 CAPLUS
 DOCUMENT NUMBER: 136:294845
 TITLE: Preparation of thienopyrimidine derivatives as
 cGMP-specific phosphodiesterase inhibitors
 INVENTOR(S): Umeda, Nobuhiro; Takada, Mitsumasa; Ikeyama, Seiichi;
 Ichikawa, Kimiko
 PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 56 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002026745	A1	20020404	WO 2001-JP8530	20010928
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2001090311	A5	20020408	AU 2001-90311	20010928
CA 2423981	A1	20030328	CA 2001-2423981	20010928
EP 1329454	A1	20030723	EP 2001-970282	20010928
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			JP 2000-299872	A 20000929
			WO 2001-JP8530	W 20010928
OTHER SOURCE(S):	MARPAT 136:294845			
IT 408322-40-7P 408322-71-4P				
RL:	IMF (Industrial manufacture); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)			
	(preparation of thienopyrimidine derivs. as cGMP-specific phosphodiesterase inhibitors)			
RN 408322-40-7 CAPLUS				
CN	Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[(3-chloro-4-methoxyphenyl)methylamino]-5-methyl-2-(3-pyridinyl)- (CA INDEX NAME)			

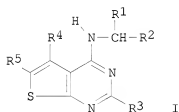


RN 408322-71-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-[[3-chloro-4-methoxyphenyl)methyl]amino]-5-methyl-2-(2-pyridinyl)- (CA INDEX NAME)



GI

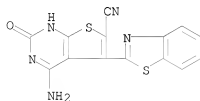


AB The title compds. I [R1 is hydrogen or C1-6 alkyl; R2 is optionally substituted C3-8 cycloalkyl, optionally substituted Ph, or an optionally substituted saturated or unsatd. heterocyclic group containing one to four

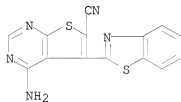
heteroatoms selected from among N, O and S; R3 is an optionally substituted saturated or unsatd. heterocyclic group (containing one to four heteroatoms selected from among N, O and S), etc. ; R4 is hydrogen, C1-6 alkyl, hydroxyl, C1-6 alkoxy, halogeno, C1-6 haloalkyl, nitro, or cyano; and R5 is cyano, optionally substituted Ph, an optionally substituted saturated or unsatd. heterocyclic group containing one to four heteroatoms selected from among N, O and S, or the like] are prepared. A process for preparing I is claimed. I are selective inhibitors of PDE5. Several compds. of this invention showed potent inhibiting activity against PDE5 (IC50 values of 0.095 nM to to 0.52 nM), vs. IC50 of 14 nM shown by sildenafil.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

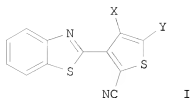
L8 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 2000:203233 CAPLUS
 DOCUMENT NUMBER: 132:321814
 TITLE: Reactivity of 3-(benzothiazol-2-yl)-3-oxopropanenitrile: a facile synthesis of novel polysubstituted thiophenes
 AUTHOR(S): Raslan, M. A.; Sayed, S. M.; Khalil, M. A.; Farag, A. M.
 CORPORATE SOURCE: Chemistry Department, Faculty of Science, South Valley University, Aswan, Egypt
 SOURCE: Heteroatom Chemistry (2000), 11(2), 94-101
 CODEN: HETCE8; ISSN: 1042-7163
 PUBLISHER: John Wiley & Sons, Inc.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 267233-26-1P 267233-28-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of polysubstituted thiophenes from benzothiazolyloxopropanenitrile)
 RN 267233-26-1 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-5-(2-benzothiazolyl)-1,2-dihydro-2-oxo- (CA INDEX NAME)



RN 267233-28-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-5-(2-benzothiazolyl)- (CA INDEX NAME)



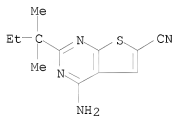
GI



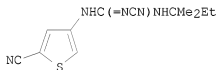
AB The reaction of 3-(benzothiazol-2-yl)-3-oxopropanenitrile with active methylene reagents and sulfur afforded polysubstituted thiophenes I (X = CN, CO₂Et; Y = NH₂, Ph). The synthetic potential of the β-enaminonitrile moiety in I (X = CN, Y = NH₂) (II) was explored. The reaction of II with active methylene reagents afforded thieno[2,3-b]pyridine derivs. Refluxing of II with acetic anhydride alone, with acetic anhydride/pyridine mixture, or with carbon disulfide in pyridine afforded the acetamido, thieno[2,3-d]pyrimidine, and pyrimidinedithiol derivs., resp. The pyrimidinedithiol was alkylated smoothly with Me iodide. Also, II reacted with trichloroacetonitrile to give the thieno[2,3-d]pyrimidine derivative

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1998:5391 CAPLUS
 DOCUMENT NUMBER: 128:114838
 TITLE: Synthesis and structure-activity relationships of
 thienylcyanoguanidine derivatives as potassium channel
 openers
 AUTHOR(S): Yoshiizumi, Kazuya; Ikeda, Shoji; Nishimura, Noriyasu;
 Yoshino, Kohichiro
 CORPORATE SOURCE: New Drug Discovery Research Laboratory, Kanebo Ltd.,
 Osaka, 534, Japan
 SOURCE: Chemical & Pharmaceutical Bulletin (1997), 45(12),
 2005-2010
 CODEN: CPBTAL; ISSN: 0009-2363
 PUBLISHER: Pharmaceutical Society of Japan
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 128:114838
 IT 201471-44-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and structure-activity relationship of thienylcyanoguanidine
 derivs. as potassium channel openers)
 RN 201471-44-5 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-2-(1,1-dimethylpropyl)-
 (CA INDEX NAME)



GI



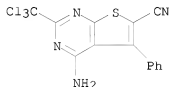
I

AB A series of potassium channel openers, i.e., several thienylcyanoguanidine
 derivs., were synthesized and evaluated for smooth muscle relaxation
 activity in vitro. Among the newly synthesized compds.,
 N-cyano-N'-(5-cyano-3-thienyl)-N''-tert-pentylguanidine (I) and
 N-(5-bromo-3-thienyl)-N'-cyano-N''-tert-pentylguanidine exhibited
 excellent activity which was proved to be based on potassium
 channel-opening action. Bioisosterism between benzene and thiophene rings
 was observed in the arylcyanoguanidines. After i.v. administration to dogs,
 I lowered the blood pressure more strongly than pinacidil.

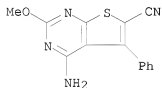
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

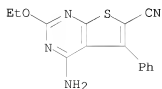
L8 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1996:120315 CAPLUS
 DOCUMENT NUMBER: 124:289294
 TITLE: Nitriles in heterocyclic synthesis: a novel synthesis of some thieno[2,3-d]pyrimidine and thieno[2,3-b]pyridine derivatives
 AUTHOR(S): Kandeel, Zaghluol El-Shahat
 CORPORATE SOURCE: Chem. Dep., Fac. Sci., Cairo Univ., Giza, Egypt
 SOURCE: Heteroatom Chemistry (1996), 7(1), 29-33
 CODEN: HETCE8; ISSN: 1042-7163
 PUBLISHER: Wiley
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 124:289294
 IT 175474-97-2P 175474-98-3P 175475-00-0P
 175475-02-2P 175475-03-3P
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)
 RN 175474-97-2 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-5-phenyl-2- (trichloromethyl)- (CA INDEX NAME)



RN 175474-98-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-2-methoxy-5-phenyl- (CA INDEX NAME)



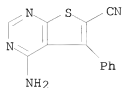
RN 175475-00-0 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-2-ethoxy-5-phenyl- (CA INDEX NAME)



10542940.trn

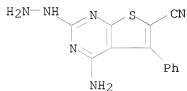
RN 175475-02-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-5-phenyl- (CA INDEX NAME)



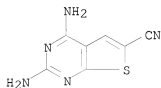
RN 175475-03-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-amino-2-hydrazino-5-phenyl- (9CI) (CA INDEX NAME)

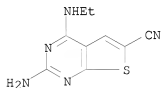


AB A simple route to the synthesis of the pharmaceutically important thieno[2,3-d]pyrimidine derivs. and of thieno[2,3-b]pyridine derivs. via the use of 5-amino-3-phenylthiophene-2,4-dicarbonitrile as a starting material is described.

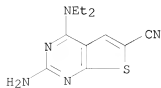
L8 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
 ACCESSION NUMBER: 1994:323449 CAPLUS
 DOCUMENT NUMBER: 120:323449
 TITLE: Synthesis of thieno[2,3-d]pyrimidines from
 4,6-dichloropyrimidine-5-carboxaldehydes
 AUTHOR(S): Clark, J.; Shahhet, M. S.
 CORPORATE SOURCE: Dep. Chem. Appl. Chem., Univ. Salford, Salford, M5
 4WT, UK
 SOURCE: Journal of Heterocyclic Chemistry (1993), 30(4),
 1065-72
 CODEN: JHTCAD; ISSN: 0022-152X
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 IT 155087-56-2P 155087-57-3P 155087-58-4P
 155087-59-5P 155087-60-8P
 RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of, from dichloropyrimidinecarboxaldehyde derivative and
 α -halo compds.)
 RN 155087-56-2 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2,4-diamino- (CA INDEX NAME)



RN 155087-57-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-amino-4-(ethylamino)- (CA INDEX NAME)

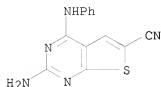


RN 155087-58-4 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-amino-4-(diethylamino)- (CA INDEX NAME)



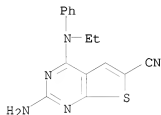
RN 155087-59-5 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-amino-4-(phenylamino)- (CA INDEX NAME)

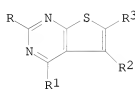


RN 155087-60-8 CAPLUS

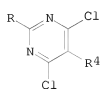
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 2-amino-4-(ethylphenylamino)- (CA INDEX NAME)



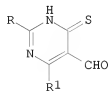
GI



I



II



III

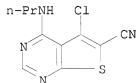
AB Several thieno[2,3-d]pyrimidines I (R = H, R1 = NH2, NHMe, NMe2, NEtPh, N(CH2)4, morpholino, R3 = CO2Me; R = NH2, R1 = NH2, NHMe, NEt2, NHPh, NEtPh, pyrrolidino, morpholino, R3 = CO2Me; R = R2 = H, R1 = NH2, R3 = CO2Et; R = R1 = H, R1 = NHMe, NMe2, N(CH2)4, R3 = Bz; R R1 = NH2, R2 = H, R3 = CONH2; R = NH2, R1 = NHMe, NEt2, NHPh, NEtPh, morpholino, R2 = H, R3 = CN) have been prepared by intramol. cyclization of 6-(substituted methylthio)-5-pyrimidinecarboxaldehyde and carbonitrile intermediates derived from 6-chloropyrimidine-5-carboxaldehydes (II; R4 = CHO) and 5-carbonitriles II (R4 = CN) and Me thioglycolate or 5-formylpyrimidine-4-(3H)-thiones III and appropriate α -halo compds. Thienopyrimidines I (R = R2 = H, R1 = SCH2CO2Et, R3 = CO2Me; R = R2 = H, R1 = NMe2, R3 = CO2Me) were nitrated to the corresponding nitro compds. I (R = H, R1 = SCH2CO2Et, R2 = NO2, R3 = CO2Me; R = H, R2 = NO2, R1 = NMe2, R3 = CO2Me). Hydrolysis at position 4 of compound I (R = R2 = H, R1 = SCH2CO2Et, R3 = CO2Me) also occurred during nitration. The ester I (R = R1 = NH2, R2 = H, R3 = CO2Me) was hydrolyzed in base to the acid I (R = R1 = NH2, R2 = H, R3 = CO2H).

10542940.trn

L8 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

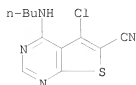
ACCESSION NUMBER: 1991:656224 CAPLUS
 DOCUMENT NUMBER: 115:256224
 TITLE: Preparation of thieno[2,3-d]pyrimidines as pesticides,
 herbicides, and plant growth regulators
 INVENTOR(S): Wiesenfeldt, Matthias; Eitzbach, Karl Heinz;
 Hofmeister, Peter; Kuenast, Christoph; Westphalen,
 Karl Otto
 PATENT ASSIGNEE(S): BASF A.-G., Germany
 SOURCE: Eur. Pat. Appl., 49 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 447891	A1	19910925	EP 1991-103547	19910308
EP 447891	B1	19940427		
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
DE 4008726	A1	19910926	DE 1990-4008726	19900319
ES 2052296	T3	19940701	ES 1991-103547	19910308
CA 2038521	A1	19910920	CA 1991-2038521	19910318
JP 04217685	A	19920807	JP 1991-52079	19910318
PRIORITY APPLN. INFO.:			DE 1990-4008726	A 19900319
OTHER SOURCE(S): MARPAT 115:256224				
IT 137271-40-0P 137271-41-1P 137271-42-2P				
137271-43-3P 137271-44-4P 137271-51-3P				
137271-55-7P 137287-33-3P 137287-35-5P				
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of, as pesticide, herbicide, and plant growth regulator)				
RN	137271-40-0 CAPLUS			
CN	Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-(propylamino)- (CA INDEX NAME)			



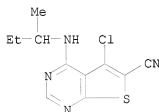
RN 137271-41-1 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 4-(butylamino)-5-chloro- (CA
INDEX NAME)

10542940.trn



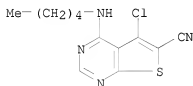
RN 137271-42-2 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-[(1-methylpropyl)amino]-
(CA INDEX NAME)



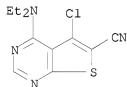
RN 137271-43-3 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-(pentylamino)- (CA
INDEX NAME)



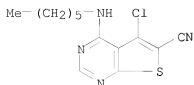
RN 137271-44-4 CAPLUS

CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-(diethylamino)- (CA
INDEX NAME)

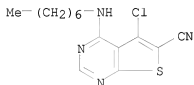


RN 137271-51-3 CAPLUS

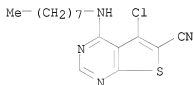
CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-(hexylamino)- (CA
INDEX NAME)



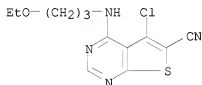
RN 137271-55-7 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-(heptylamino)- (CA
 INDEX NAME)



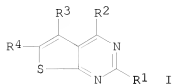
RN 137287-33-3 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-(octylamino)- (CA
 INDEX NAME)



RN 137287-35-5 CAPLUS
 CN Thieno[2,3-d]pyrimidine-6-carbonitrile, 5-chloro-4-[(3-ethoxypropyl)amino]-
 (CA INDEX NAME)



GI



AB Title compds. I [R1 = H, C1-5 alkyl, C1-3 chloroalkyl, C3-6 cycloalkyl, Ph, CH2Ph; R2 = F, Cl, Br, iodo, OH, N3, NR5R6, etc.; R3 = Cl, Br, OH, SH; R4 = H, C1-6 alkyl, C3-6 haloalkyl, Ph, cyano, CHO, CO2H, etc.; R5,R6 = H, NH2, organic group or NR5R6 = 3-8 membered heterocyclyl; with provisos] were prepared Thus 2-amino-3-cyano-4-oxo-4,5-dihydrothiophene was added to POCl3 at room temperature DMF was added dropwise and the solution was stirred 1 h at room temperature and 2.5 h at 75° to give title compound I (R1, R4 = H; R2, R3 = Cl) in 94% yield. Over 300 I were prepared, with some tested as pesticides, herbicides, etc.

10542940.trn

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	44.08	414.25
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-6.40	-8.00

STN INTERNATIONAL LOGOFF AT 11:39:34 ON 05 FEB 2008